

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the above-referenced application.

Listing of Claims:

1. (Currently amended) A measuring device, ~~a pH-measuring device in particular, which has~~
comprising:

an elongated first electrode $[(2)]$ having a longitudinal axis $[(7)]$ for insertion into a material $[(16)]$ to be measured; and has

a housing $[(3)]$ which at least partially surrounds the first electrode $[(2)]$,
~~characterized in that~~ wherein the first electrode $[(2)]$ is ~~designed to be~~ movable in the axial direction $[(X)]$ of its the longitudinal axis $[(7)]$.

2. (Currently amended) The measuring device as recited in Claim 1, ~~characterized in that~~
wherein a receptacle device (17, 23, 26) is provided for accommodating one end $[(13)]$ of the first electrode $[(2)]$.

3. (Currently amended) The measuring device as recited in Claim 2, ~~characterized in that~~
wherein the receptacle device (17, 23, 26) is made of an elastic material which yields in the axial direction $[(X)]$ with a movement of the first electrode $[(2)]$.

4. (Currently amended) The measuring device as recited in ~~one of Claims 2 or 3~~ Claim 2,
~~characterized in that~~ wherein the receptacle device (17, 23, 26) has a damping element
(22, 25) or is connected to a damping element which yields in the axial direction $[(X)]$
with a movement of the first electrode $[(2)]$ and thereby exerts a force directed in the
opposite direction on the end $[(13)]$ of the first electrode $[(2)]$.
5. (Currently amended) The measuring device as recited in Claim 4, ~~characterized in that~~
wherein the damping element (22, 25) is designed as a rubber buffer $[(25)]$.
6. (Currently amended) The measuring device as recited in ~~one of Claims 4 or 5~~ Claim 4,
characterized in that the damping element (22, 25) is designed as a spring $[(22)]$.
7. (Currently amended) The measuring device as recited in ~~one of Claims 4 through 6~~ Claim 4,
~~characterized in that~~ wherein the housing $[(3)]$ has a base plate $[(12)]$ on the side of
the receptacle device (17, 23, 26) and the receptacle device (17, 23, 26) is part of the base
plate $[(12)]$.
8. (Currently amended) The measuring device as recited in Claim 7, ~~characterized in that~~
wherein the base plate $[(12)]$ is made of an elastic material.
9. (Currently amended) The measuring device as recited in Claim 7, ~~or 8, characterized in that~~
wherein the base plate $[(12)]$ is designed like a diaphragm and has folded sections
 $[(21)]$.

10. (Currently amended) The measuring device as recited in ~~Claims 2 through 9~~ Claim 2, characterized in that the receptacle device ~~(17, 23, 26)~~ has a recess ~~(17, 26)~~ for form-fittingly receiving one end ~~[[13]]~~ of the first electrode ~~[[2]]~~.
11. (Currently amended) The measuring device as recited in Claim 10, ~~characterized in that~~ further comprising a sealing device ~~[[28]]~~ ~~is provided~~ through which the one end ~~[[13]]~~ of the first electrode ~~[[2]]~~ is in tight contact with the recess ~~(17, 26)~~.
12. (Currently amended) The measuring device as recited in ~~one of the preceding claims~~ Claim 1, ~~characterized in that~~ wherein the electrodes ~~(2, 15)~~ first electrode is glued or welded to the housing ~~[[3]]~~ or ~~are~~ is encased.
13. (Currently amended) The measuring device as recited in ~~one of the preceding claims~~ Claim 1, ~~characterized in that~~ wherein contact rods ~~(35, 36)~~ are provided and at least one of which is ~~are~~ connected to the electrodes ~~(2, 15)~~ first electrode and which protrude through ~~the~~ a base plate ~~[[12]]~~ and are bent on a bottom side ~~[[37]]~~ of the base plate ~~[[12]]~~ so that the bent ends of these contact rods ~~(35, 36)~~ are threaded into eyes ~~[[38]]~~ provided specifically for this purpose on the bottom side ~~[[37]]~~ of the base plate ~~[[12]]~~.

14. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1, ~~characterized in that~~ further comprising a chamber ~~[(14)]~~ which is enclosed by the housing ~~[(3)]~~ and is tight with respect to the outside ~~is provided; and~~ at least one second electrode ~~[(15)]~~ ~~[(is)]~~ provided between the first electrode ~~[(2)]~~ and ~~the~~ a casing ~~[(4)]~~, and ~~the~~ a base plate ~~[(12)]~~ tightly seals a lower area of the chamber ~~[(14)]~~.
15. (Currently amended) The measuring device as recited in Claim 14, ~~characterized in that~~ wherein a polymer protolyte liquid is added to the chamber ~~[(14)]~~, surrounding the first and/or second electrodes (2, 15).
16. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1, ~~characterized in that~~ wherein the first electrode (2, 47) is situated in a tube (32), ~~in particular a glass tube (32) to which an electrolyte liquid is added.~~
17. (Currently amended) The measuring device as recited in Claim 16, ~~characterized in that~~ wherein the tube ~~[(32)]~~ is displaceable in the axial direction ~~[(X)]~~ toward the first electrode ~~[(2)]~~.
18. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1, ~~characterized in that~~ wherein the housing ~~[(3)]~~ is displaceably situated on a measuring tip ~~[(4)]~~ with respect to the first electrode ~~[(2)]~~.

19. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1,
~~characterized in that~~ wherein a diameter $[(d1)]$ of the housing $[(3)]$ decreases in the
direction of a measuring tip $[(4)]$ of the first electrode $[(2)]$.
20. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1,
~~characterized in that~~ wherein the first electrode $[(2)]$ and/or a protective sleeve $[(32)]$
surrounding it is made at least partially of glass.
21. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1,
~~characterized in that~~ wherein the first electrode (2) is pivotably mounted.
22. (Currently amended) The measuring device as recited in Claim 21, ~~characterized in that~~
wherein the first electrode $[(2)]$ has pivoting means $[[,]]$ ~~in particular a joint~~ via which
the first electrode $[(2)]$ is pivotable away from the axial direction $[(X)]$ in the case of a
force component $[(F_Y)]$ perpendicular to the axial direction $[(X)]$.
23. (Currently amended) The measuring device as recited in ~~the preceding claims~~ Claim 1,
~~characterized in that~~ wherein the housing $[(3)]$ contains at least in part a SAN or ABS
material.

24. (Currently amended) A portable pH meter ~~[[(40)]]~~ having a modular replaceable pH measuring device, ~~(1, 10)~~ ~~as recited in one of the preceding claims~~ wherein said measuring device includes:

an elongated first electrode having a longitudinal axis for insertion into a material to be measured; and

a housing which at least partially surrounds the first electrode, wherein the first electrode is movable in the axial direction of its longitudinal axis.

25. (Currently amended) The pH meter as recited in Claim 24, ~~characterized by further~~ comprising a housing (41) in which a display ~~[[(43)]]~~ and a keyboard ~~[[(42)]]~~ are situated in said housing and ~~[[by]]~~ a circuit board ~~[[(44)]]~~ from which spring contacts ~~[[(45)]]~~ lead away to contacts ~~(18, 19)~~ of the first electrode and a second electrode ~~electrodes (2, 15)~~, the contacts being situated on a bottom side ~~[[(34)]]~~ of the base plate ~~[[(12)]]~~.

26. (Currently amended) A method for manufacturing a measuring device ~~as recited in one of~~

~~Claims 1 through 23, including the following assembly steps comprising:~~

- (a) encasing electrically conducting contact rods ~~(35, 36)~~ to form a base plate ~~[(12)]~~ out of which protrude the contact rods ~~(35, 36)~~ for at least one of a first ~~and/or~~ and a second electrode ~~(1, 15)~~;
- (b) adding an electrode liquid to a tube ~~[(32)]~~;
- (c) inserting the first electrode into the tube ~~[(32)]~~ and gluing the tube ~~[(32)]~~ to the base plate ~~[(12)]~~;
- (d) welding the base plate ~~[(12)]~~ to an empty casing ~~[(11)]~~ to form a housing ~~[(3)]~~ which has a chamber ~~[(14)]~~;
- (e) adding a polymer protolyte liquid of the second electrode ~~[(15)]~~ into the chamber ~~[(14)]~~.

27. (Currently amended) The method as recited in Claim 26, ~~characterized in that~~ wherein the

contact rods ~~(35, 36)~~ protruding out of the housing ~~[(3)]~~ are bent over to form contacts on the outside wall of the housing ~~[(3)]~~.

28. (Cancelled)

29. (Currently amended) The measuring device as recited Claim 1, further comprising:

at least one second electrode disposed between the first electrode and housing;

and

contact rods connected to the first and second electrodes and which protrude through a base plate and are bent on a bottom side of the base plate so that the bent ends of the contact rods are threaded into eyes provided specifically for this purpose on the bottom side of the base plate.

30. (New) A method for measuring pH, comprising:

inserting a measuring device into a material to be measured , wherein said measuring device includes:

an elongated first electrode having a longitudinal axis for insertion into a material to be measured; and

a housing which at least partially surrounds the first electrode, wherein the first electrode is movable in the axial direction of its longitudinal axis, and wherein said first electrode is surrounded by a polymer protolyte material.